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ABSTRACT

A project developed a content model for international project management training. It also compiled a bibliography of project management references, identified specific project management training needs based upon a survey of international sponsors and contractor personnel, and documented the training needs of international project managers. Data were collected through a literature review, survey of international sponsoring agencies and contractor organizations, and interviews with individuals from agencies and organizations. The Project Management Institute taxonomy, as published in 1983, was used as the initial content framework of the model. Nine areas in which training was needed were included in the model: scope management, time management, cost management, quality management, human resources management, communications management, cultural management, procurement management, and legal requirements management. Major training needs in each area were identified. Project manager supervisors felt that the most effective means of providing training was through a modularized set of competency-based materials and that new project managers would benefit from customized training programs. (YLB)

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PROJECT MANAGEMENT FOR INTERNATIONAL DEVELOPMENT

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INTRODUCTION

Project management is the art of directing and coordinating human and material resources throughout the life of a project by using modern management techniques to achieve predetermined objectives of scope, cost, time, quality, and participant satisfaction (Project Management Institute, 1986). Why is project management important to international development? Assistance for international development is project oriented. The major sponsors of international development activities (e.g. World Bank, African Development Bank, U.S. Agency for International Development) use a project approach in providing assistance. The specific activities within a project are planned and agreed upon in advance. Funds to conduct the project are allocated to cover the costs. In all areas, project management has become increasingly important as donor funds have increased.

Most donor funds are for joint projects with countries. The recipients of assistance provide the leadership and the vast majority of the personnel for projects. Typically, an in-country person serves as the project director. It is not at all unusual, however, for a contractor to appoint an individual as chief-of-party to manage and oversee its role in the project. Both leaders can be more effective if they have a project management orientation.

Because the project approach is in such wide use, the need for capable project managers is underscored. Generally, contractors and host government officials seek to select individuals whom they perceive as capable of carrying out the project management responsibilities. Even with careful attention being given to selection, many of the individuals who are selected for project management responsibilities have not had any training in project management. Most degree programs offer few opportunities for project management training.

Projects are conducted within a framework of limited resources, specified time schedules, and rigorous performance requirements. To help project managers achieve successful outcomes, a training program is needed. Training is needed by individuals who are assuming project management roles in or for other countries.

The overall goal of this project was to enhance the capacity of international project managers. The specific objectives of the project were to --

- Compile a bibliography of project management references based upon a review of literature

- Identify specific project management training needs based upon a survey of international sponsors and contractor personnel
- Document the training needs of international project managers
- Develop a model for international project management training

METHODOLOGY

Data for this final report were collected through three major means: 1) review of the literature, 2) survey of international sponsoring agencies and contractor organizations, and 3) interviews with individuals from a select number of agencies and organizations. Each of these means provided valuable information necessary to construct the content model for international project management training.

Review of the Literature

A comprehensive search for literature related to project management training needs was conducted. The literature was reviewed to identify key tasks that project managers must perform in each area to be effective.

Contractor and Sponsor Survey

A second strategy for assessing project manager training needs was a survey of key personnel of international sponsor and contractor organizations. Project staff devised a survey questionnaire containing 30 items across the 6 major project management areas (i.e. scope, human resources, cost, time, communications, and quality). Rating scales were employed to obtain indications of how well project managers, whom the respondents have supervised, could perform key tasks. Opportunities were also provided for respondents to identify the task they considered of greatest importance for each area and to note comments and suggestions. Survey questionnaires were completed by 25 individuals from 11 different agencies and organizations.

In-depth Interviews

In-depth interviews were conducted with seven representatives of five agencies and organizations. An interview guide was constructed to provide structure to the interviews, to assure comparability of data collected from the respondents, and to extend the information collected with the questionnaire. Each interview was conducted by two researchers and required

approximately one hour to complete. The team approach was used to increase reliability of information collected and to engage the interviewee in dialogue from different perspectives.

Analysis

The data collected through the various means were subjected to descriptive analysis techniques. Frequency counts, means, percents, and ranks were used to summarize quantitative data, whereas qualitative data such as open-ended responses were subjected to content analysis. Results of these analyses, summaries of interviews and other firsthand information provided the basis for the conclusions and recommendations delineated in this report.

FINDINGS

Respondent Profile

Data sources for this study included individuals from various kinds of agencies and organizations-- donor agencies, for profit corporations, non-profit international service agencies, and government agencies. Respondents held varying positions in their respective agencies and organizations. The vast majority had supervised international managers, all were informed about training needs of project managers, and a few had served as international project managers themselves. The respondents had supervised varying numbers of international project managers in 56 different countries.

Need for Project Management

Of areas considered in this study, the respondents were least in agreement on cost management. The quantitative data showed that cost management is the area where project manager training needs are the greatest. That is, project managers perform the tasks in this area less well than the tasks in any other area. The qualitative data yielded some interesting interpretations of this finding.

Several respondents felt that cost management is not an area for which the project manager has responsibility. These individuals argued that it is the home office responsibility to manage project costs. Other individuals stated that cost management responsibilities are always assigned to a financial management expert -- largely because the project managers lack the requisite skills to perform this function adequately. This latter view supports the need for training project managers in cost management.

As a group, respondents all felt that project managers must at least have a working familiarity with cost management. Training to accomplish this result could range from training in spreadsheets to maintaining accurate cost data and analyzing and reporting cost performance.

Training in the five other major areas was deemed important by the respondents. Across all tasks, the perceived need for training in priority order was --

- cost management
- quality management
- scope management
- human resources management
- communications management
- time management

In addition to supporting the need for training in each of the six major project management areas, respondents identified three additional areas of need for training international project managers. These were 1) cultural understanding, 2) procurement, and 3) legal requirements.

Sensitivity to the culture in which the project manager works was brought up repeatedly by the respondent group. Some respondents felt that a general sensitization to work in the international community was sufficient. Others felt that an in-depth understanding of the political, economic, sociological and technological climate of the specific countries was essential. Also important was an understanding of the national development plan and policy. In some cases, respondents felt that it was important for project managers to speak the language of the country in which they work.

While procurement management is of importance to project managers in general, it is especially important for international project managers. Almost without exception, the international project manager will need to acquire materials and services during project execution. The process by which the materials and services are acquired is procurement.

Several respondents felt that it was exceedingly important for project managers to be knowledgeable of the country's legal requirements. Legal regulations could affect such factors as site selection, hiring practices, and procurement, among others.

THE MODEL

A model serves as a representation of present reality and speculation on a possible future. Because observations of the present situation may be inaccurate and speculation about the future subject to change, a model must be dynamic. Models are a form of shorthand to express ideas and relationships, often in graphic form.

In developing the model, we gave special consideration to three characteristics: simplicity, comprehensiveness and potential utility. The PMI taxonomy, as published in 1983, was used as the initial content framework. PMI's definitions for each of the components follow:

Scope Management is the function of controlling a project in terms of its aims, goals and objectives through the processes of conceptual development, full scope definition or statement, scope reporting and control, and project close out.

Time Management is the function required to maintain appropriate allocation of time to the overall conduct of the project through the successive stages of its natural life-cycle (i.e., concept, development, execution, and termination) by mean of the processes of time planning, time estimating, time scheduling, and schedule control.

Cost Management is the function required to maintain effective financial control of the project through the processes of evaluating, estimating, budgeting, monitoring, analyzing, forecasting, and reporting the cost information.

Quality Management: Quality itself is the composite of material attributes (including performance features and characteristics) of the product or service which are required to satisfy the need for which the project is launched. Quality standards may be attained through the sub-functions of quality assurance and quality control.

Human Resources Management is the function of directing and coordinating human resources throughout the life of the project by applying the art and science of behavioral and administrative knowledge to achieve the predetermined project objectives of scope, cost, time, quality and participant satisfaction.

Communications Management is the proper organization and control of information transmitted by whatever means to satisfy the needs of the project. It includes the processes of transmitting, filtering, receiving and interpreting or understanding information.

Survey and interview respondents recommended three additional project management training needs for international project managers:

- o Cultural management
- o Procurement management
- o Legal requirements management

PMI's definition for contract procurement is--

Contract-Procurement Management is the function through which resources (including people, plant, equipment and materials) are acquired for the project (usually through some form of formal

contract) in order to produce the end product. It includes the processes of establishing strategy, instituting information systems, identifying sources, selection, conducting proposal or tender invitation and award, and administering the resulting contract.

Cultural management and legal requirements management are areas of particular importance to project managers working internationally. Because these areas only emerged during the in-depth interview, definitions and identification of specific tasks were not accomplished.

The content model for international project management is depicted in Figure 1.

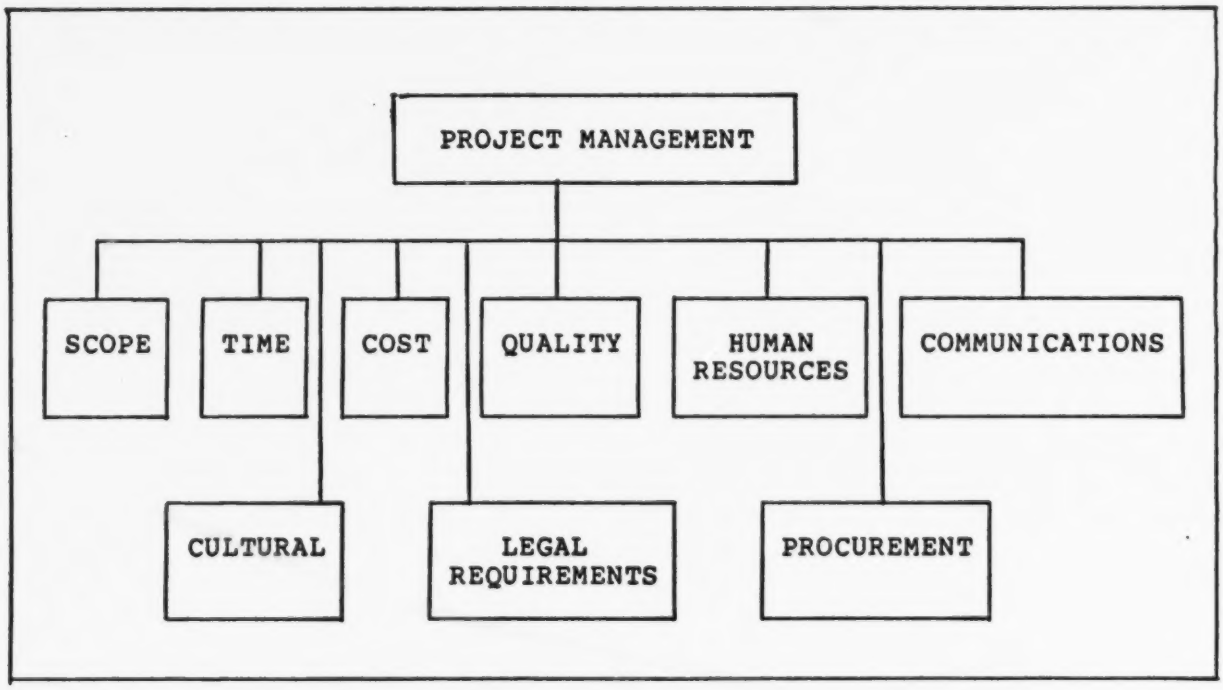

Figure 1. Model for project management

To elaborate the model further, we constructed an individual model identifying the major training needs in six of the nine areas. Each of the following sub-sections contains a brief overview, findings stemming from the mail survey and interview, and a graphic portrayal of the most important training needs.

Scope Management

The controlling of the project scope in terms of the aims, goals and objectives of the client is of paramount importance. Implementation planning is a critical task for international

project managers, requiring a whole range of modern planning techniques (e.g., PERT, CPM). Of equal importance is giving continued attention to the implementation plan, project proposal and contract.

Because project managers often are chosen for their technical expertise and sometimes over-identify with the host government during long-term assignments, they have difficulty in comprehending and adhering to the scope of the project. The project manager also may have trouble in relating the project scope to the national policy and development plan. The project manager is faced with firmly administering a project with enough flexibility to be effective in the local circumstances.

The survey findings placed "identifying activities or tasks" as the most important task, while "taking corrective action" was the greatest training need. Training needs in the area of scope management are --

- o corrective actions
- o time, cost, and performance
- o problem solving
- o resource identification
- o scope definition
- o implementation planning

Time Management

Time (management) is central to an overall definition of project management--management of efforts that by definition are temporary and have a definite beginning and end. As is the case for all managers, project managers must have the ability to manage their own time as well as the total project schedule.

One of the biggest mistakes that inexperienced international project managers make is to allow insufficient time for obtaining necessary approvals from host government officials. Sensitivity to the culture is, therefore, especially important in time management. It is not surprising that our respondents identified "estimating time requirements of tasks" as the most important task in this area as well as the one for which there is the greatest training need. While "identifying alternative schedules for meeting objectives" was deemed as the second most important training need, "establishing the logical sequence of activities or tasks" and "estimating the time requirements" were deemed equally important.

Several respondents felt that project managers should have a good working knowledge of project management tools (e.g., PERT and CPM) to manage time more effectively. Training needs in time management are --

- o time estimation
- o scheduling alternatives

- o project scheduling
- o milestone identification
- o task sequencing
- o networking techniques

Cost Management

Often the preparation of budgets, scheduling of expenditures, and maintaining of cost data are home office tasks. Several agencies indicated that cost management was handled by a separate individual on site, not assigning this management area to the project technical manager. Nevertheless, those interviewed indicated that project managers must be familiar with spreadsheets, cost data, and the financial consequences of technical decisions. Furthermore, while better communications have made it possible for home offices to monitor and direct on-site operations, on-site managers must be able to respond more often and more rapidly to home office inquiries about expenditures.

The need to use local money on projects intensifies the need for on-site managers to be familiar with accounting procedures. The training needs in cost management are --

- o cost analysis and reporting
- o cost recording
- o cost scheduling
- o budgeting
- o cost variance justification

Quality Management

The quality (process and product) of an international development project may be elusive; nevertheless, it is essential to long term effects of the project and the reputation of the contractor. Described as the pivot between hard and soft components of management, quality management becomes the focal point of scope, time and cost management and human resources and communications management. Quality can indeed become the end of all management efforts. Survey respondents considered "establishment of standards," "measurement of attainment," and "assurance of client acceptance" as equally important. The greatest training needs were in the "establishing standards," "measuring attainment" and "interpreting the impact of variance." The most important training needs are --

- o quality standards
- o quality variances
- o project performance
- o implementing modifications
- o client satisfaction

Human Resources Management

The role of the international project manager as the integrator of the project effort highlights the importance of human resources management. Integration means achieving coordination and collaboration among all project team members, or even several different agencies or organizations that have never before worked closely together. Project-related human resources coordination requirements are often quite complex. The project manager achieves coordination by appropriate behaviors such as maintaining communications with the project team and the home office, resolving conflicts, and developing the project team.

Also, interpersonal problems are inherent in the project organization structure. Good relationships with key government officials and in-country counterparts are key to eventual project institutionalization. In large part, the effectiveness of project managers in managing international projects is related to their ability to elicit support and involvement among their project personnel.

In characterizing an ideal project manager, one respondent noted that project managers may have to use creative approaches to win over the support of the project team. An example she provided was the enterprising project manager who purchased mopeds for his team members to negotiate the long distances they had to travel on a regular basis.

The survey respondents identified "encouragement of project team members to work effectively as a team" and "dealing with conflicts" as the two most important tasks that a project manager has to accomplish in human resources management. The greatest training needs, on the other hand, were --

- o participatory decision making
- o organizational policy
- o project team development
- o team building
- o conflict resolution

Communications Management

Communications in project management are of two major types: written and verbal. It is not at all unusual for project managers to rely more heavily on one type than the other. Some individuals are more comfortable with written communications while other are just the opposite. The international project manager finds it necessary to communicate effectively both verbally and in writing.

According to our respondents, the international project manager has to be alert to miscommunications that may occur because of speed of delivery, nuances in meaning, and gestures. Far too

often project managers speak more rapidly than a non-native speaker can comprehend. If the project manager has failed to develop the necessary cultural understanding, the project manager may also invoke sensitivities arising from important cultural differences.

In terms of written communications, it is particularly important for the project manager to document project information. Documentation may involve setting up and maintaining project logs and workable project files. In some instances, the complexities of the project may require a workable management information system. Probably more than any other factor advances in communication technology have intensified the project manager's relationship to the home office and thereby the need for improved communications management. Training needs are--

- o feedback and feed-forward channels
- o communication techniques
- o documentation
- o client presentations
- o communications linkages

BEYOND THE MODEL

Project manager supervisors feel that the most effective means of providing training is through a modularized set of competency-based materials. The reasons are many. First, project managers who work internationally have widely varying training needs. Some project managers are quite adept at carrying out the tasks in one or more project management areas but deficient in many others. A modularized approach would provide an efficient way of selecting and working on specific training needs. Second, project managers working in another country would more likely study a module of particular interest than general materials. This would be especially beneficial for individuals who were not in a position to attend a formal training program. Third, modules addressing the most critical needs could be developed first, and subsequent modules developed as additional resources were secured.

In addition to development of modularized materials, new project managers would benefit from customized training programs ranging from one to six weeks in duration. Because Washington, D.C. is the home for the sponsoring agencies and many of the contractor organizations, it would be the most desirable location for such training. The training program would focus on practical, direct applications using such methods as simulation and gaming.

CONCLUSIONS

Based upon the survey and interview results, certain general conclusions can be posited:

- All of the project management functions advanced by the Project Management Institute are applicable to international projects, including scope, time, cost, quality, human resource, and communications management.
- Additional functions for international project management include procurement, cultural understanding, and legal requirements management.
- International project managers could benefit from training in all functions
- Certain tasks of each project management function are especially important to international managerial success
- About 200-300 new project managers need training annually; the need is greater for host country managers
- A demand exists for training programs ranging from one to six weeks in the Washington, DC area
- While reference materials are available from the World Bank, U.S. Agency for International Development, and commercial sources, additional training materials are needed in the area of project management
- Technical assistance is probably not feasible, because of the cost. Some firms would replace a manager rather than provide on-site technical assistance.

RECOMMENDATIONS

Several recommendations directed at meeting the training needs of international project managers can be posited:

- To establish a relevant, up-to-date curriculum base for a modularized training program, the DACUM (Developing A Curriculum) process should be used to determine the specific tasks of international project managers.
- Using the results of DACUM, a set of training materials should be developed. The materials should be developed in modular format to allow open entry and open exit.
- A pilot testing of the training materials should be designed and conducted. In this way, any problems in the materials can be identified and corrected.